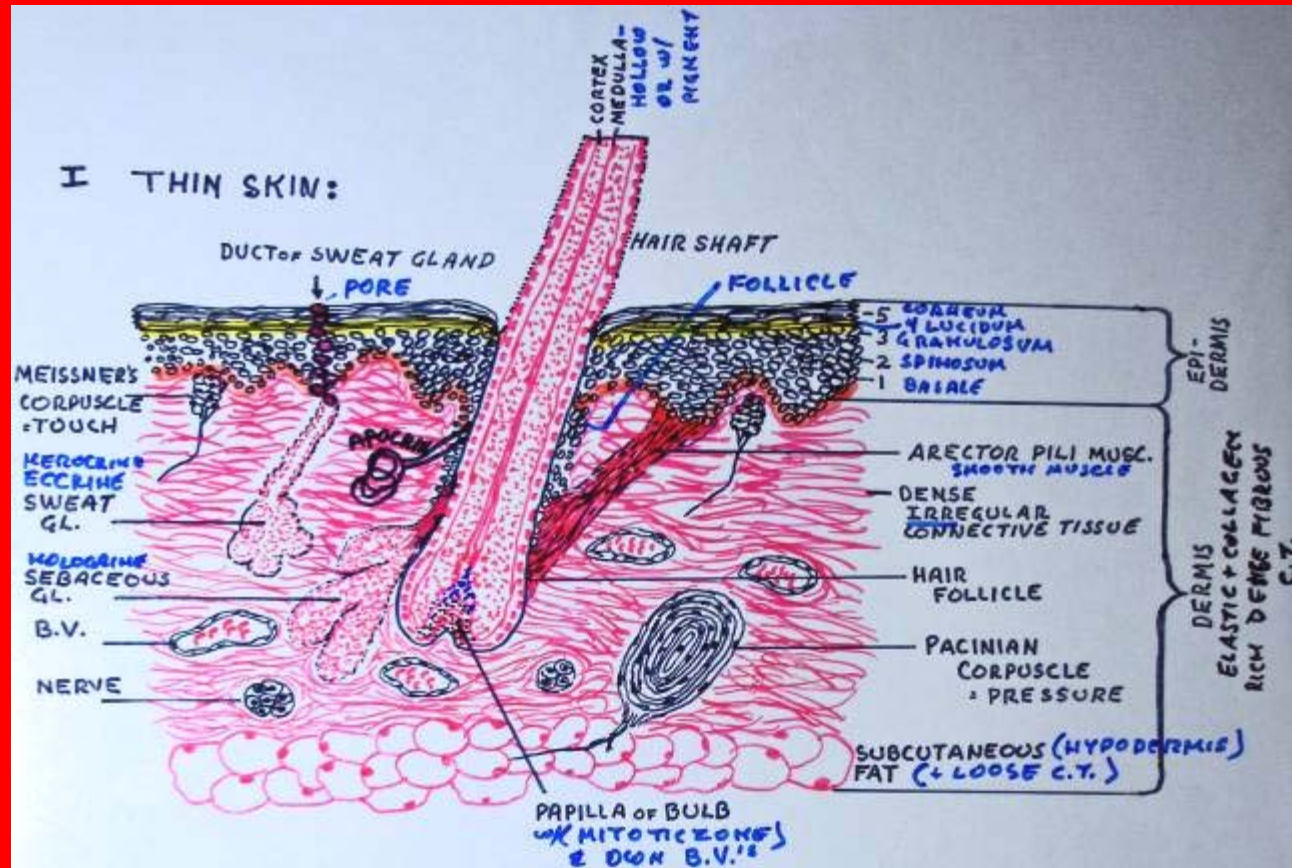
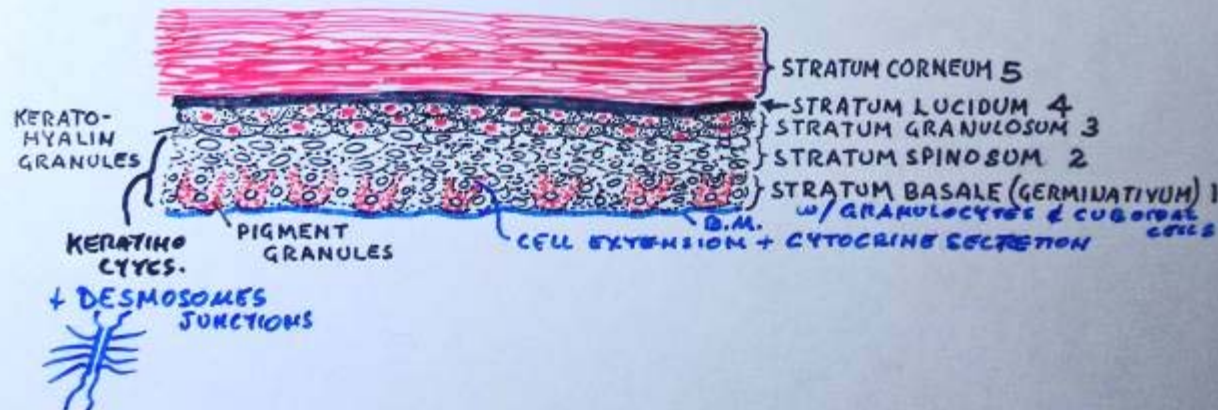


***SKIN HISTOLOGY – the  
microscopic anatomy of  
the Integument***



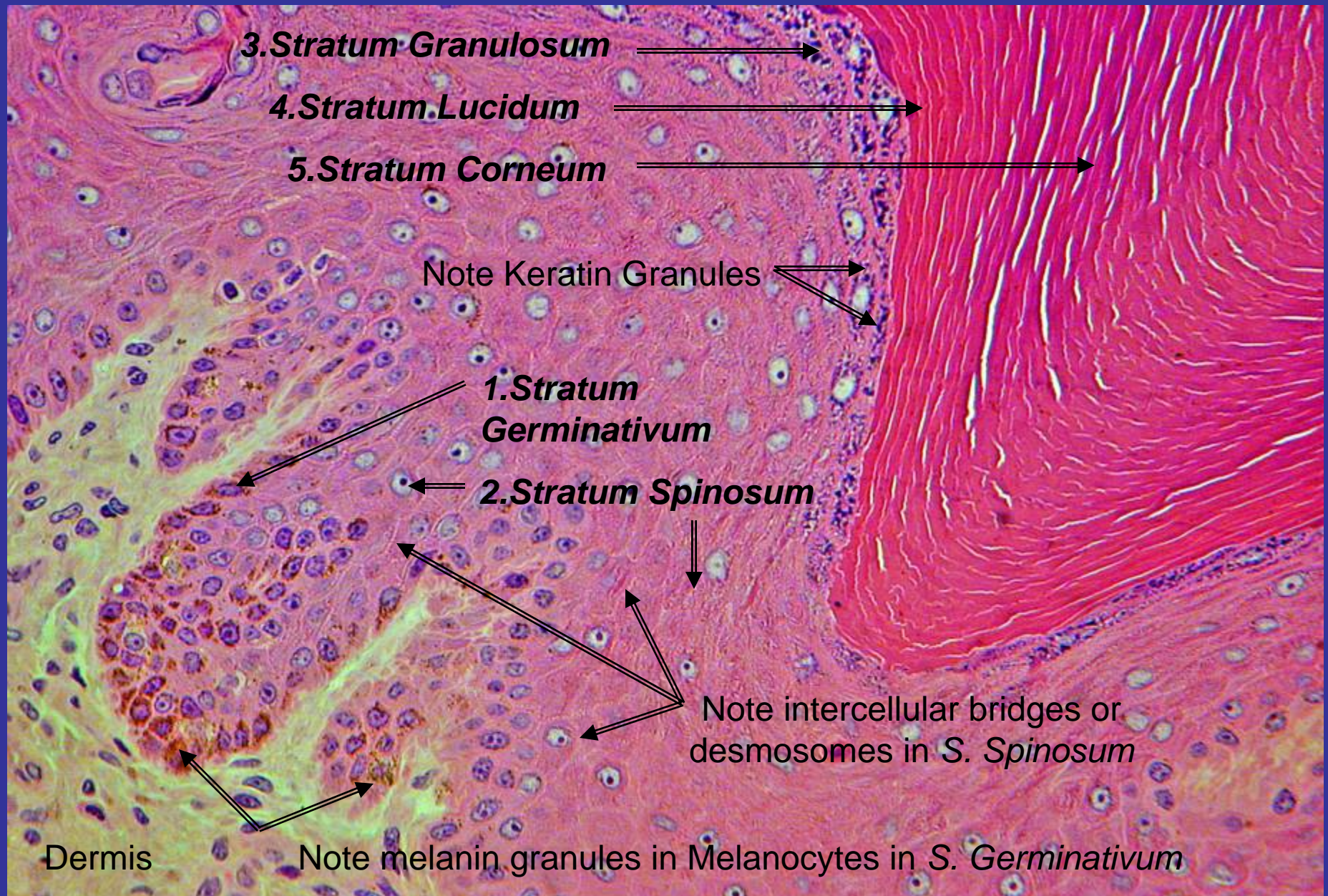
## II THICK SKIN EPITHELIUM:



Hair follicles, sweat glands, sebaceous glands (even teeth) are products of the epidermis, embryologically speaking ectoderm, that extend downward into the dermis.



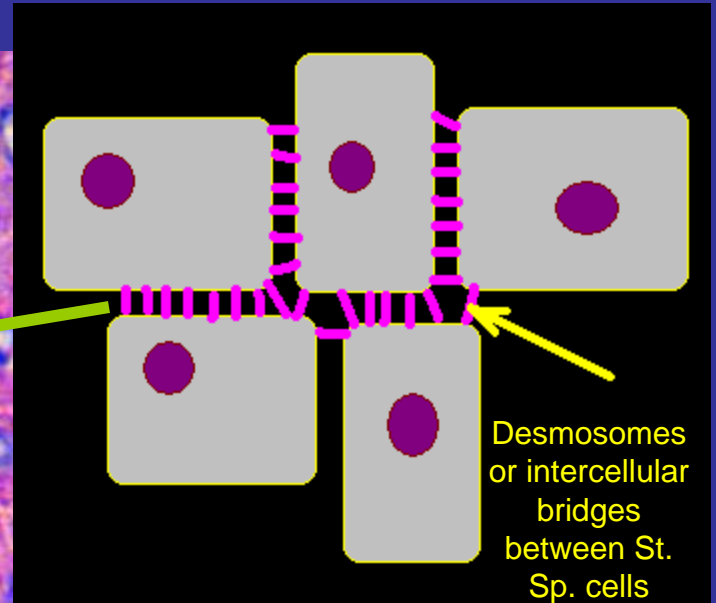
## Palms & soles – 'thick skin'



**The 5 Layers of the Epidermis (1.5  $\mu$ m ultra thin section, @100X, H&E)**



Cells start in  
1.SG and  
pass up  
through into  
5.SC to  
slough off

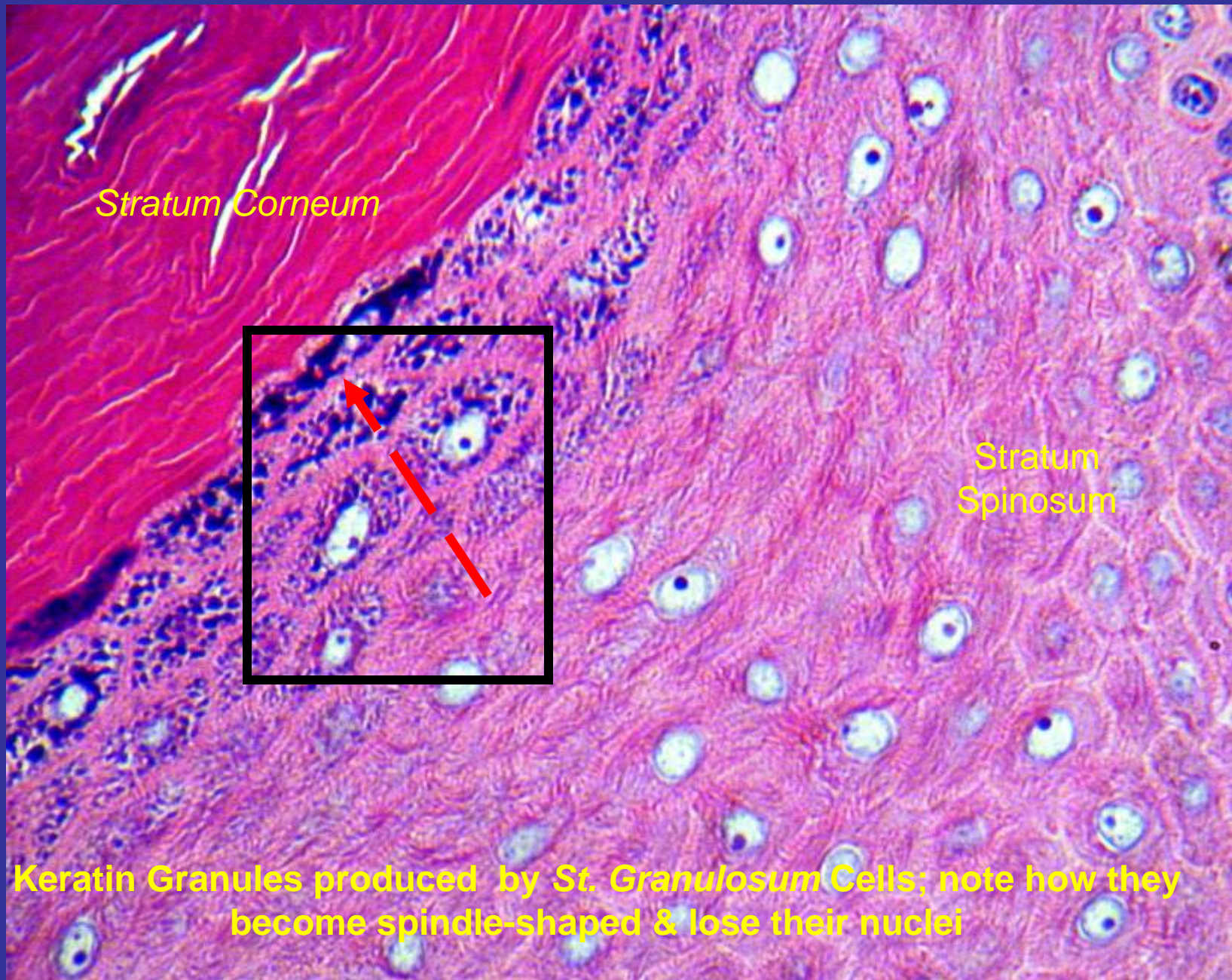


Pigment or Melanin Granules in St.  
Germinativum, these “melanocytes”  
are where Melanomas arise in  
neoplastic growth, but dark color  
absorbs UV light

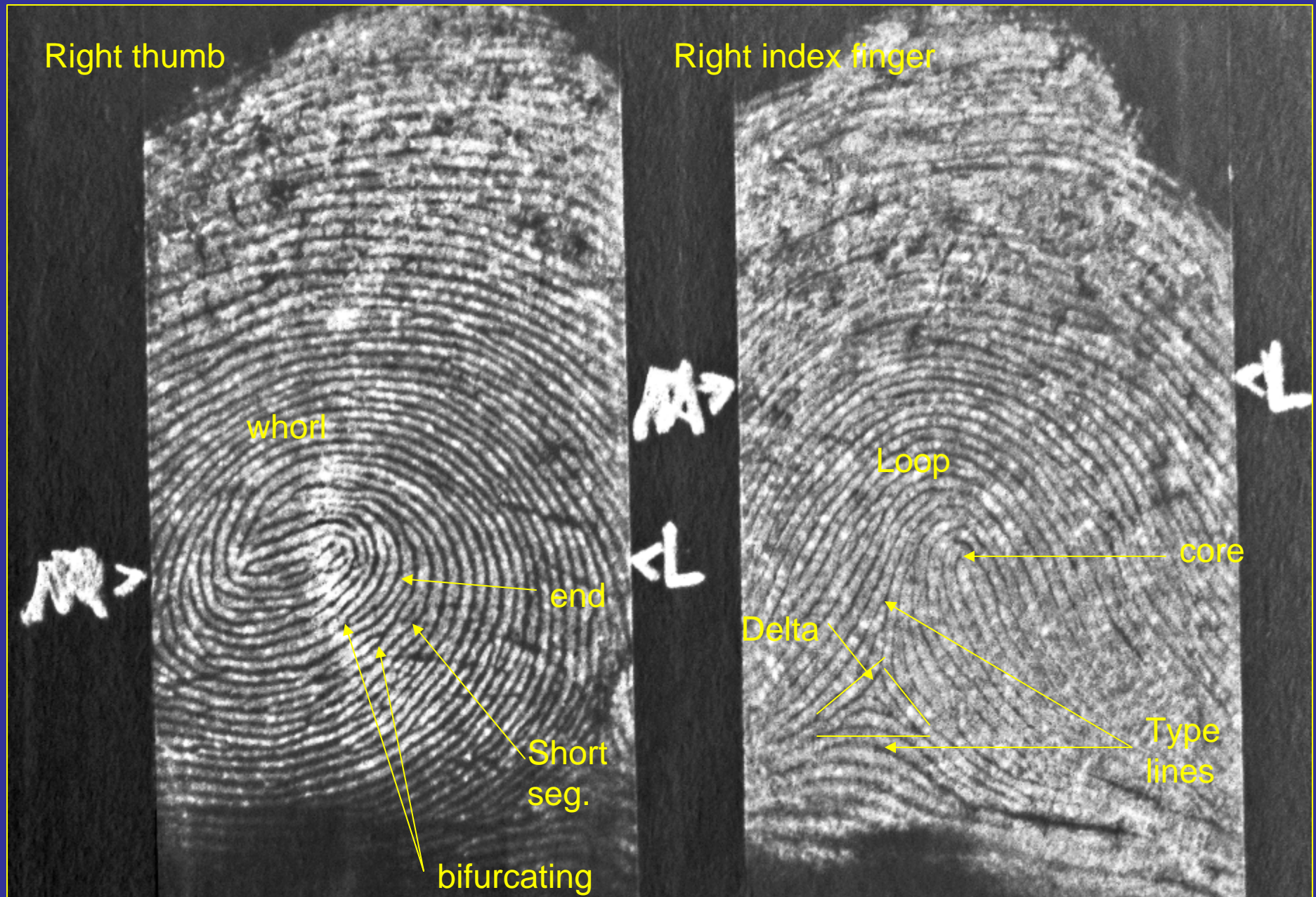
DERMIS

Intercellular Bridges ( Desmosomes → ) in *Stratum Spinosum*



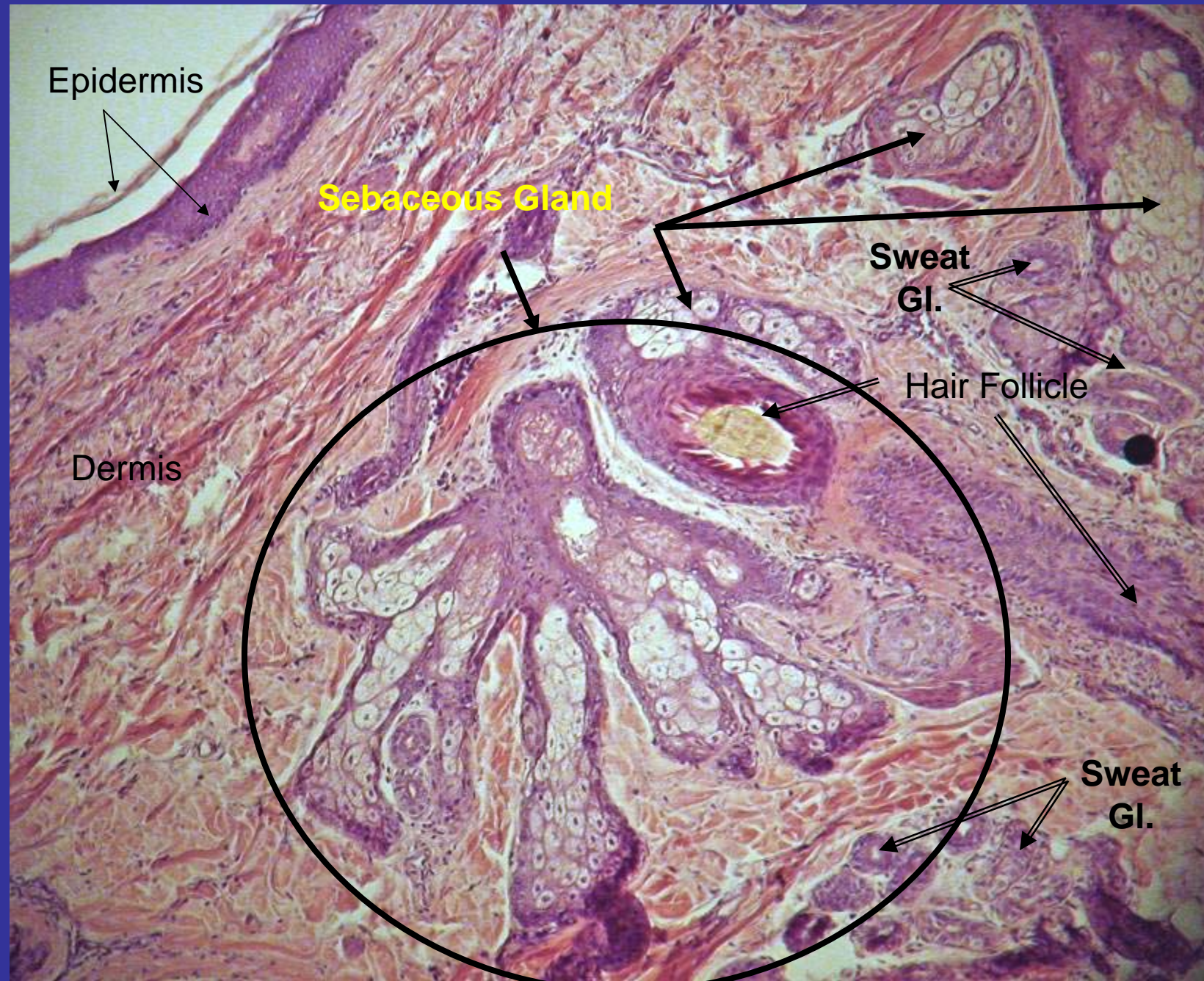






*Matching an individual's dermal ridge patterns in **fingerprint** analysis – NQ 2 are alike*





Epidermis

Sebaceous Gland

Dermis

Sweat  
Gl.

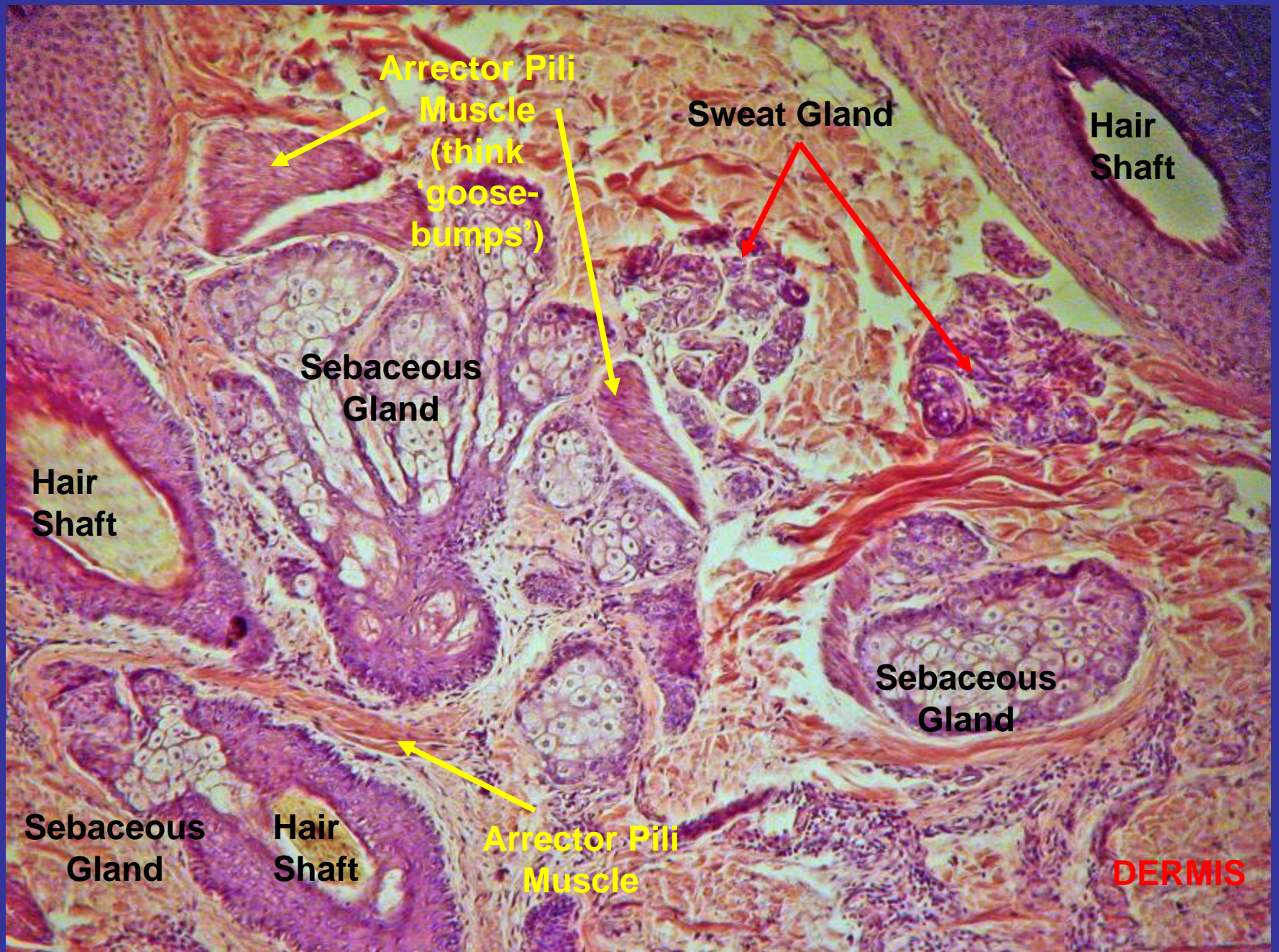
Hair Follicle

Sweat  
Gl.

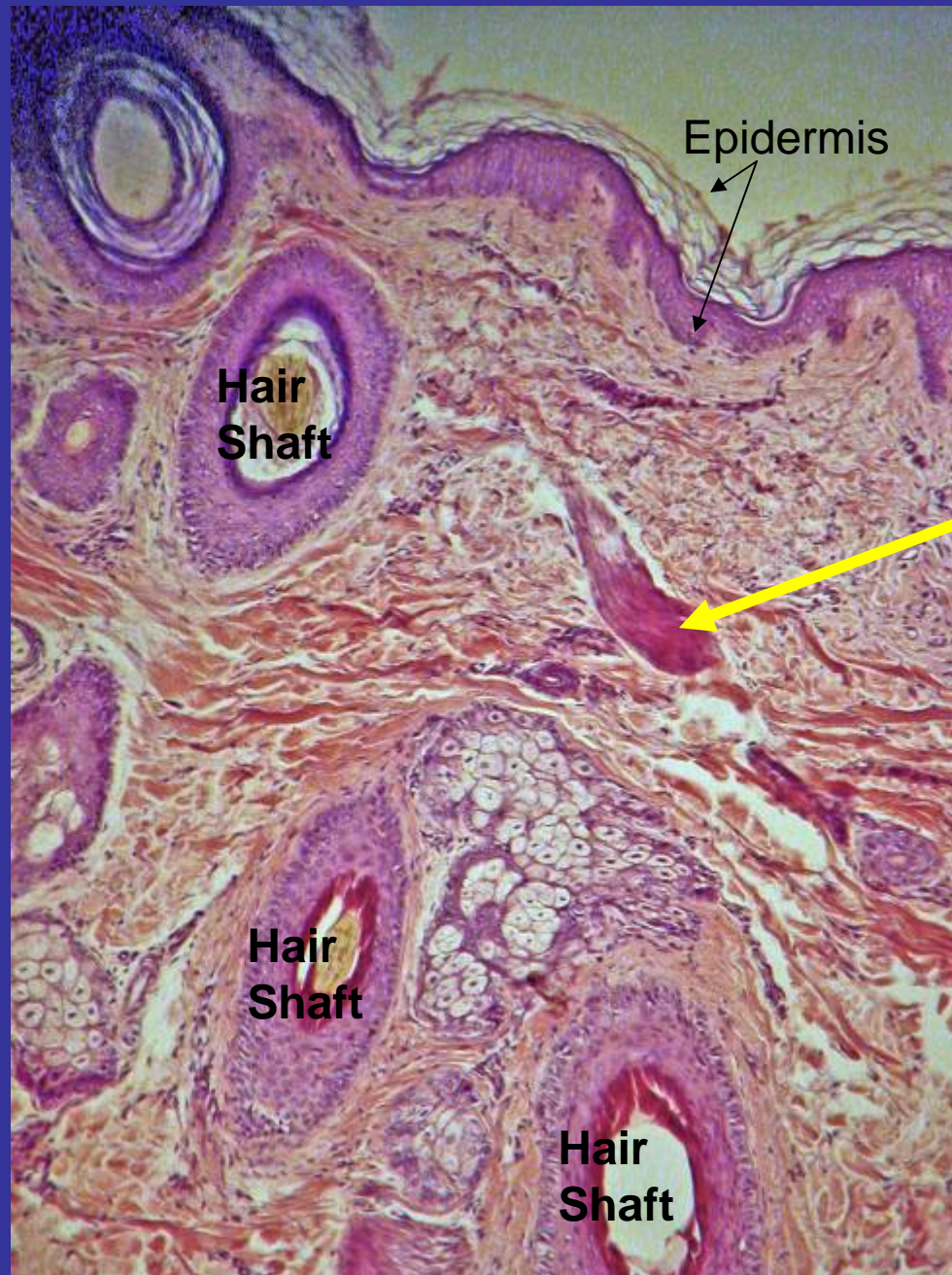
**'THIN SKIN'**

Hair and sebaceous glands









Epidermis

Hair  
Shaft

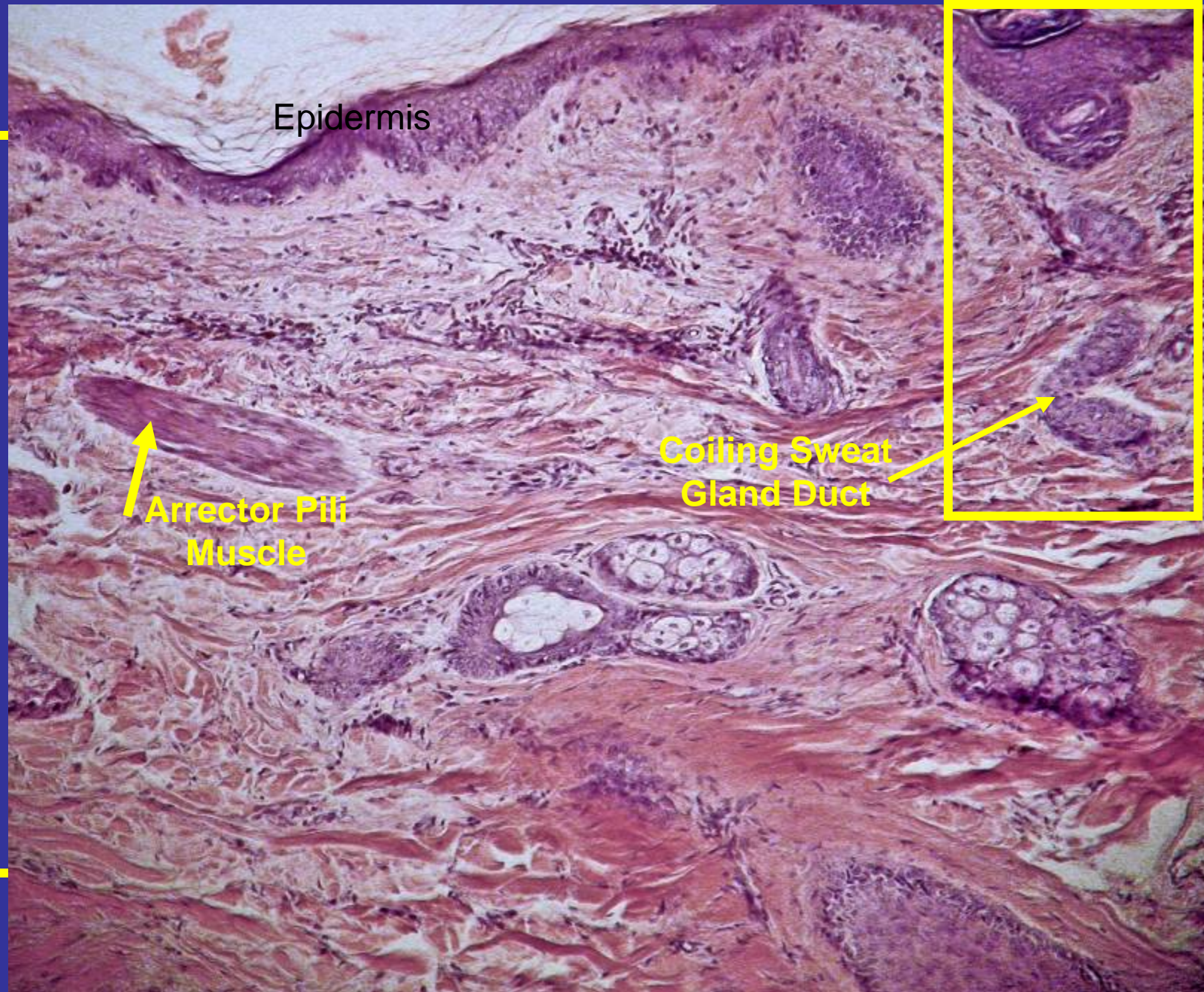
Arrector Pili  
Muscle

Hair  
Shaft

Hair  
Shaft



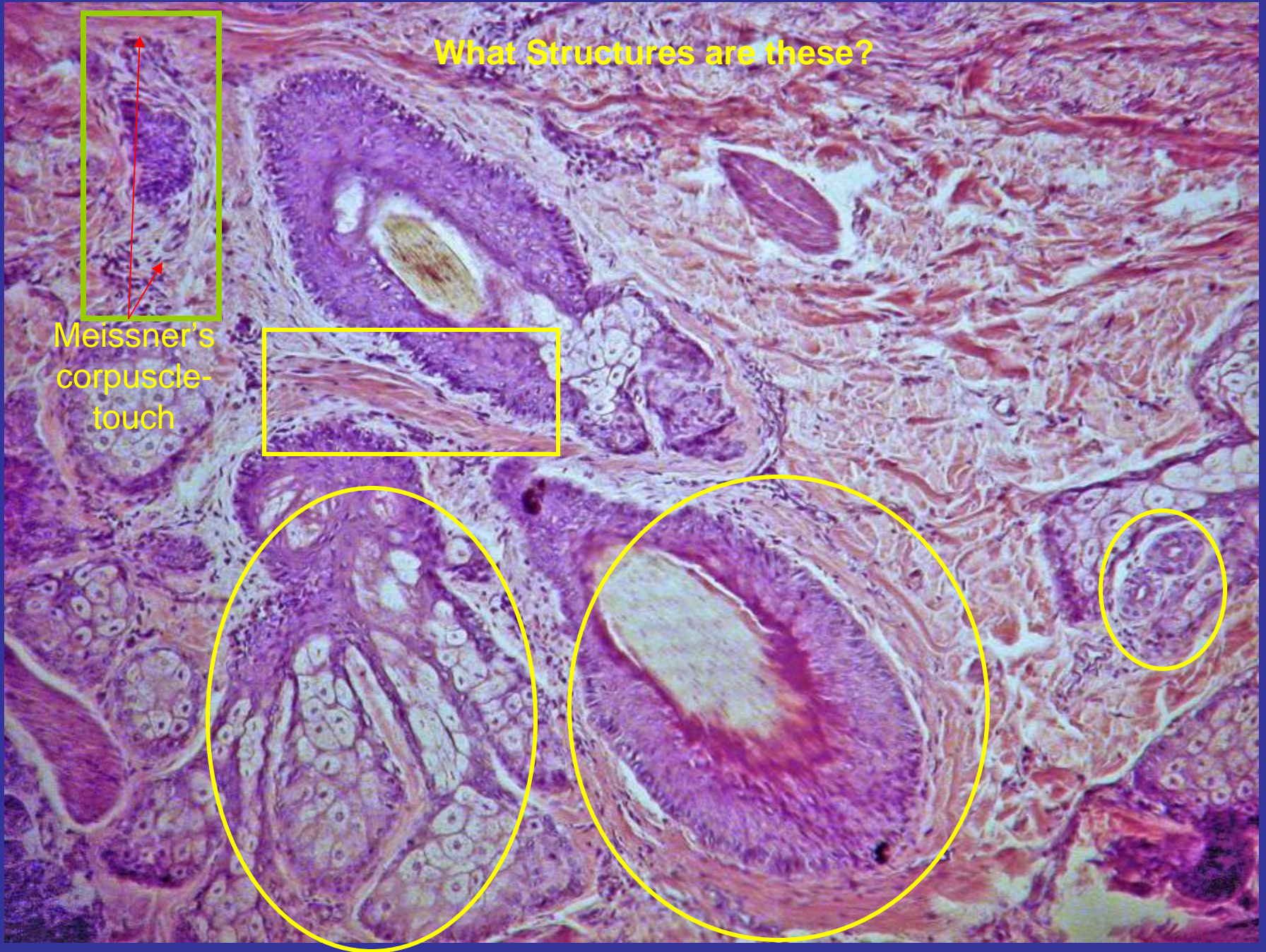
D  
E  
R  
M  
I  
S



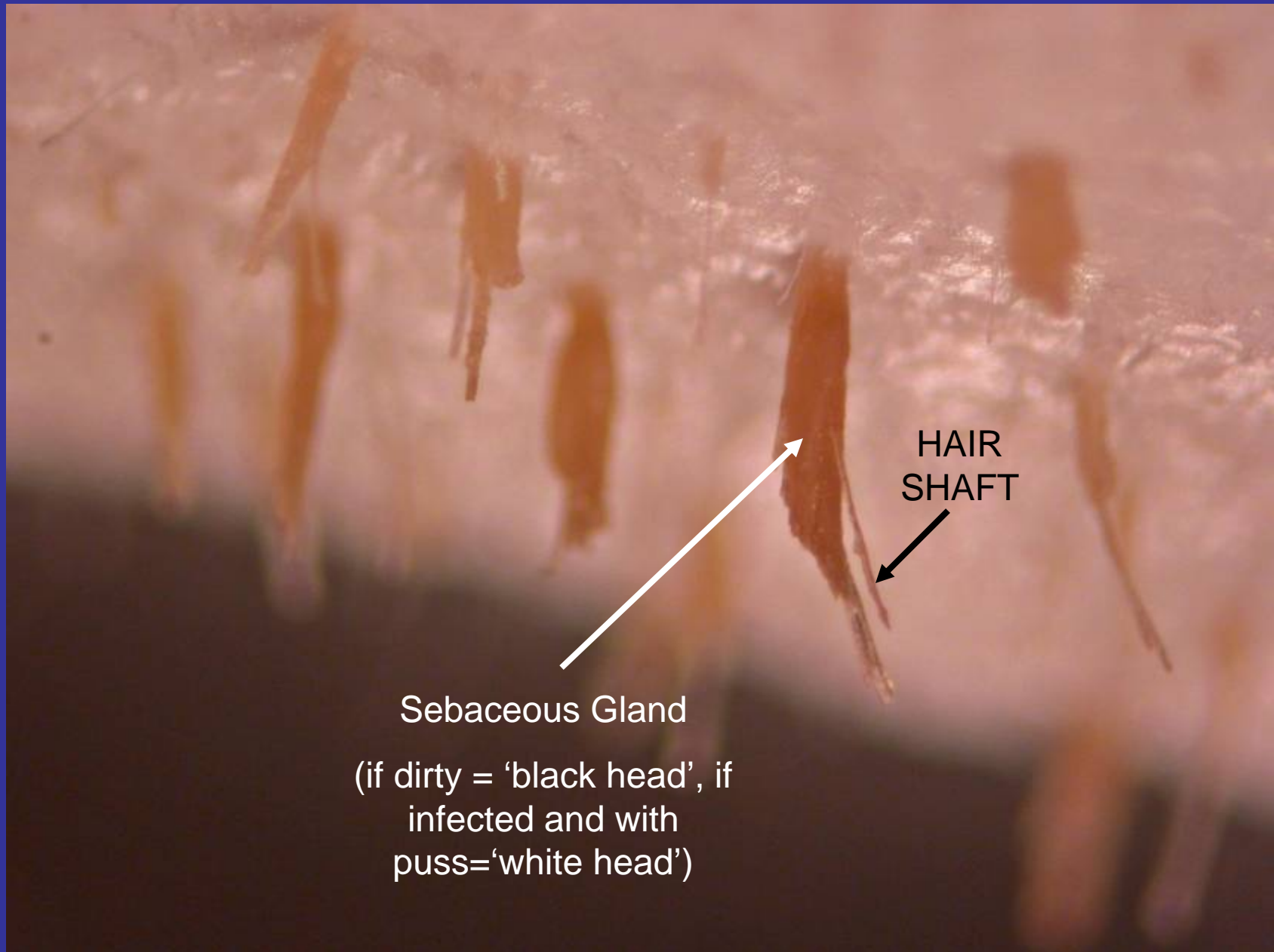


What Structures are these?

Meissner's  
corpuscle-  
touch







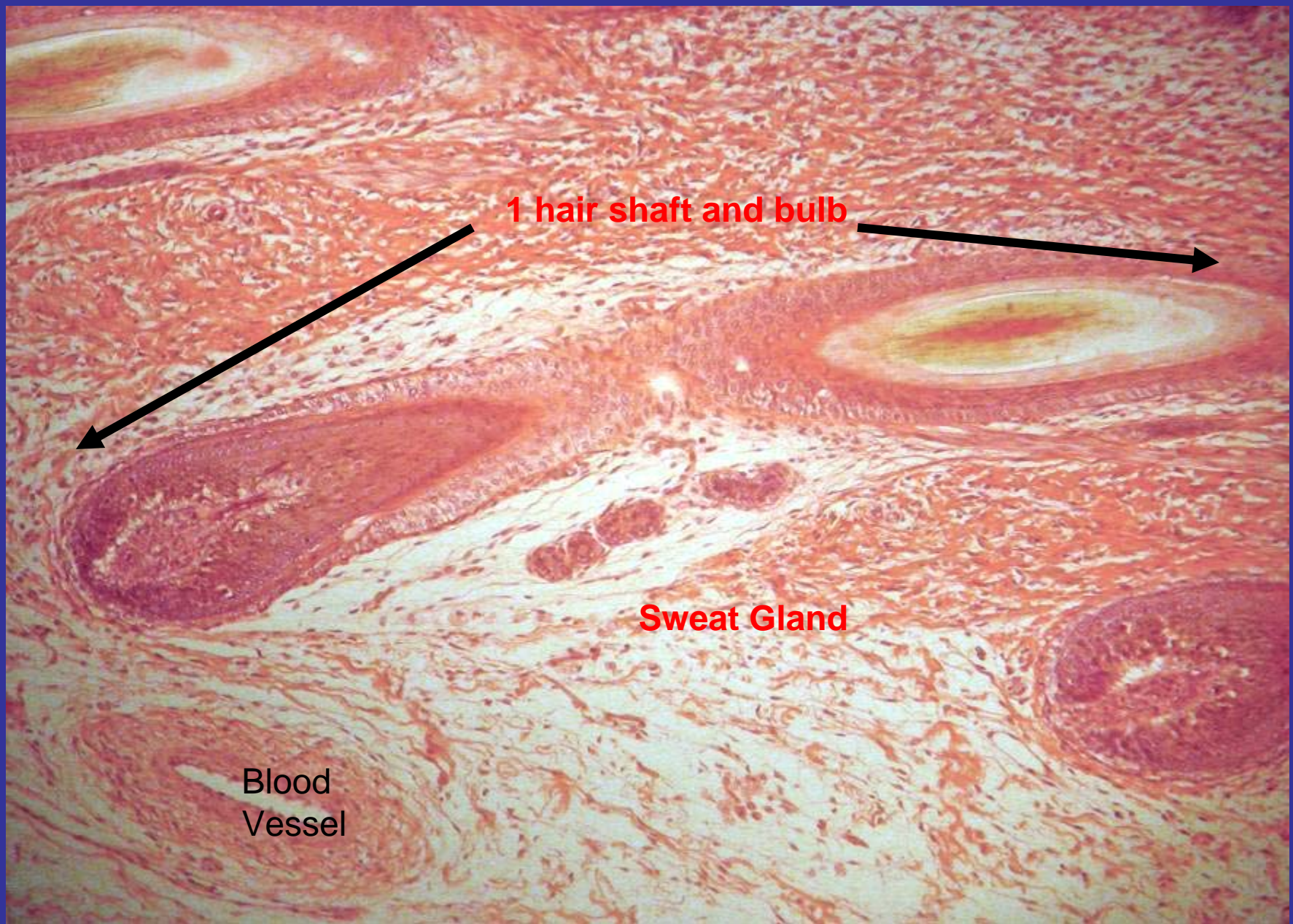
HAIR  
SHAFT

Sebaceous Gland

(if dirty = 'black head', if  
infected and with  
puss='white head')

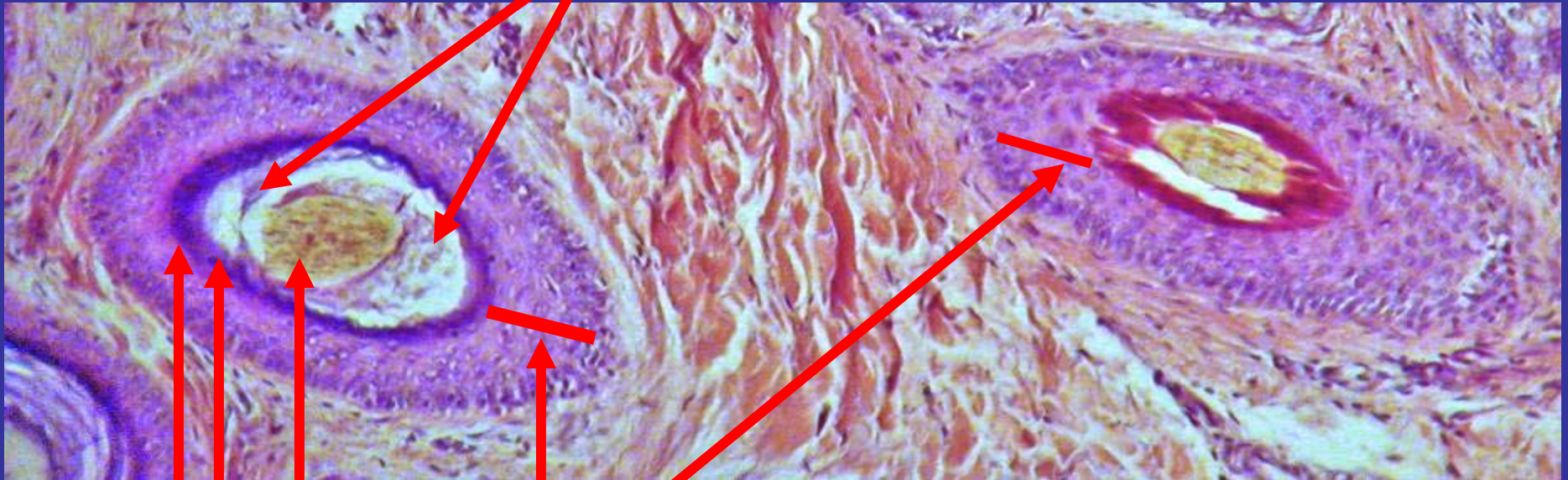
**Reverse of skin (peel) showing hairs & associated sebaceous glands**







Cuticle of hair & inner root sheath



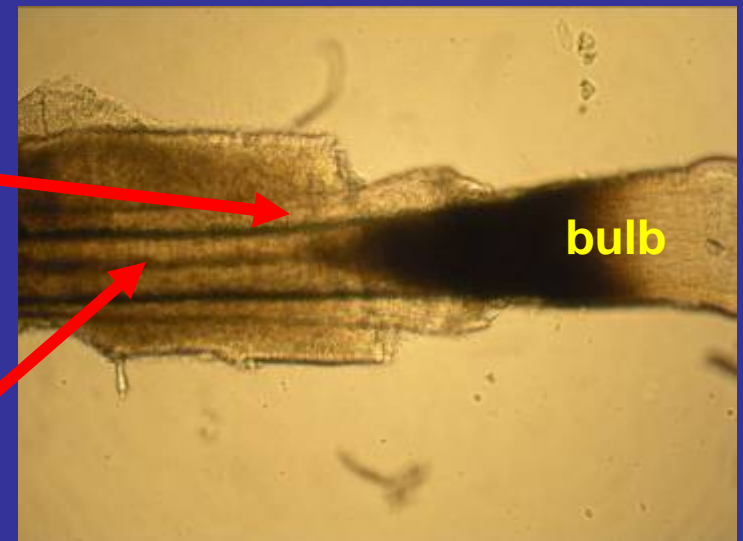
Outer epithelial  
root sheath

Cortex of hair

"Huxley's layer"

"Henley's layer"

Medulla in  
center of  
Cortex;  
together =  
hair shaft



bulb

Plucked hair and bulb





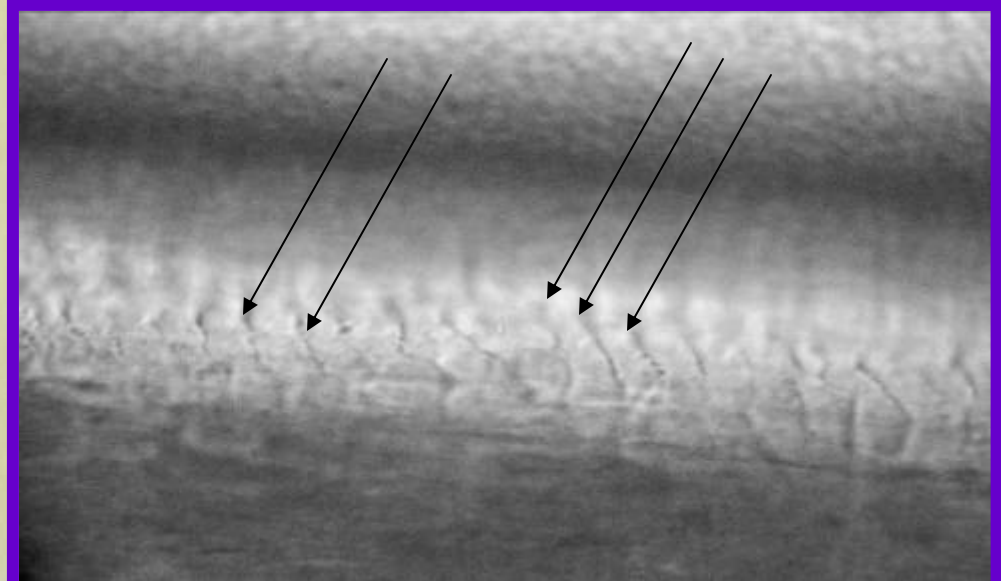
**Hair Shaft**

**Broken frag. of epidermis**

**Hair 'Bulb': full of DNA**

**overlapping scales on surface of  
human hair**

**Pulled hair**



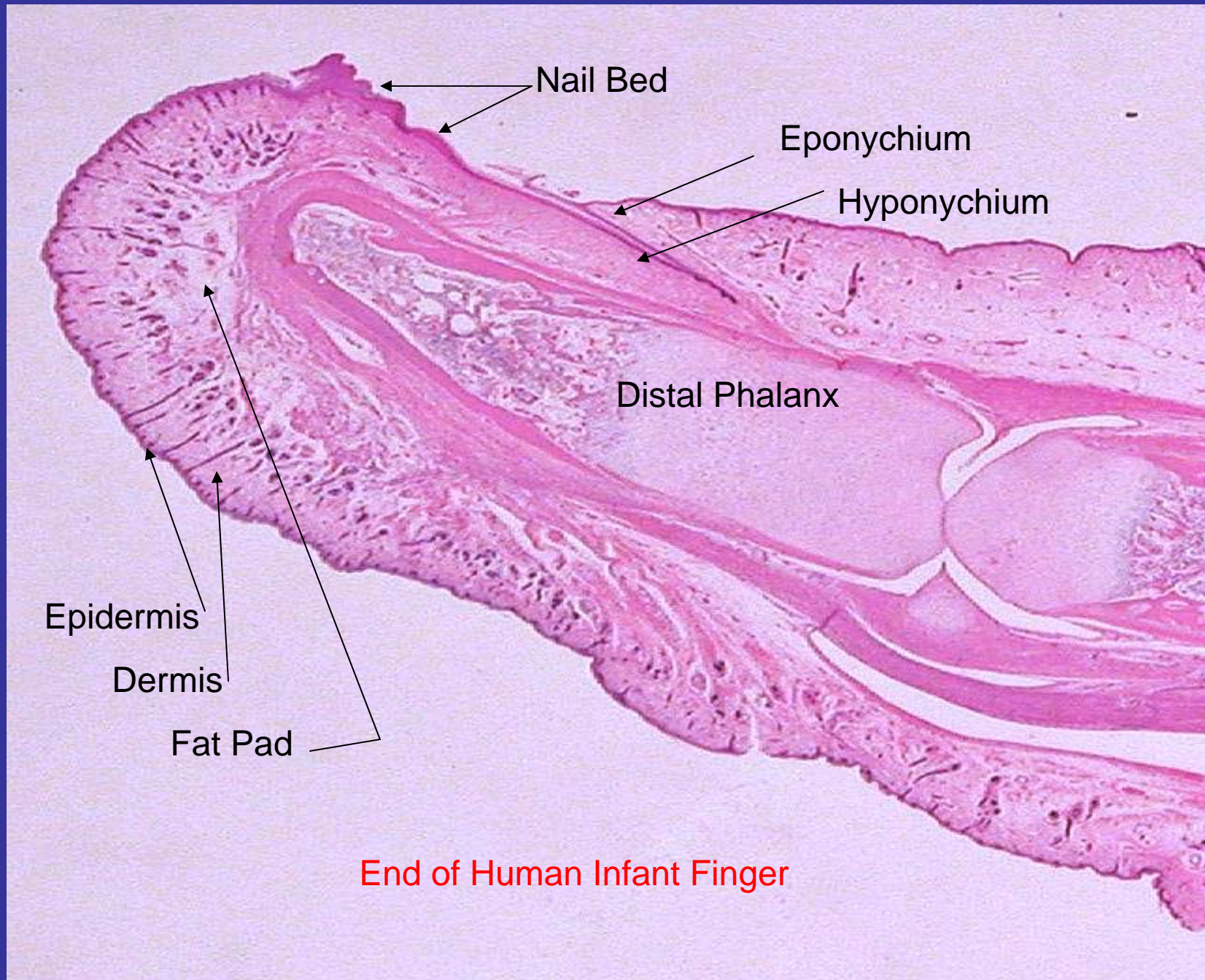




Root of Hair with its Papilla

Bulb

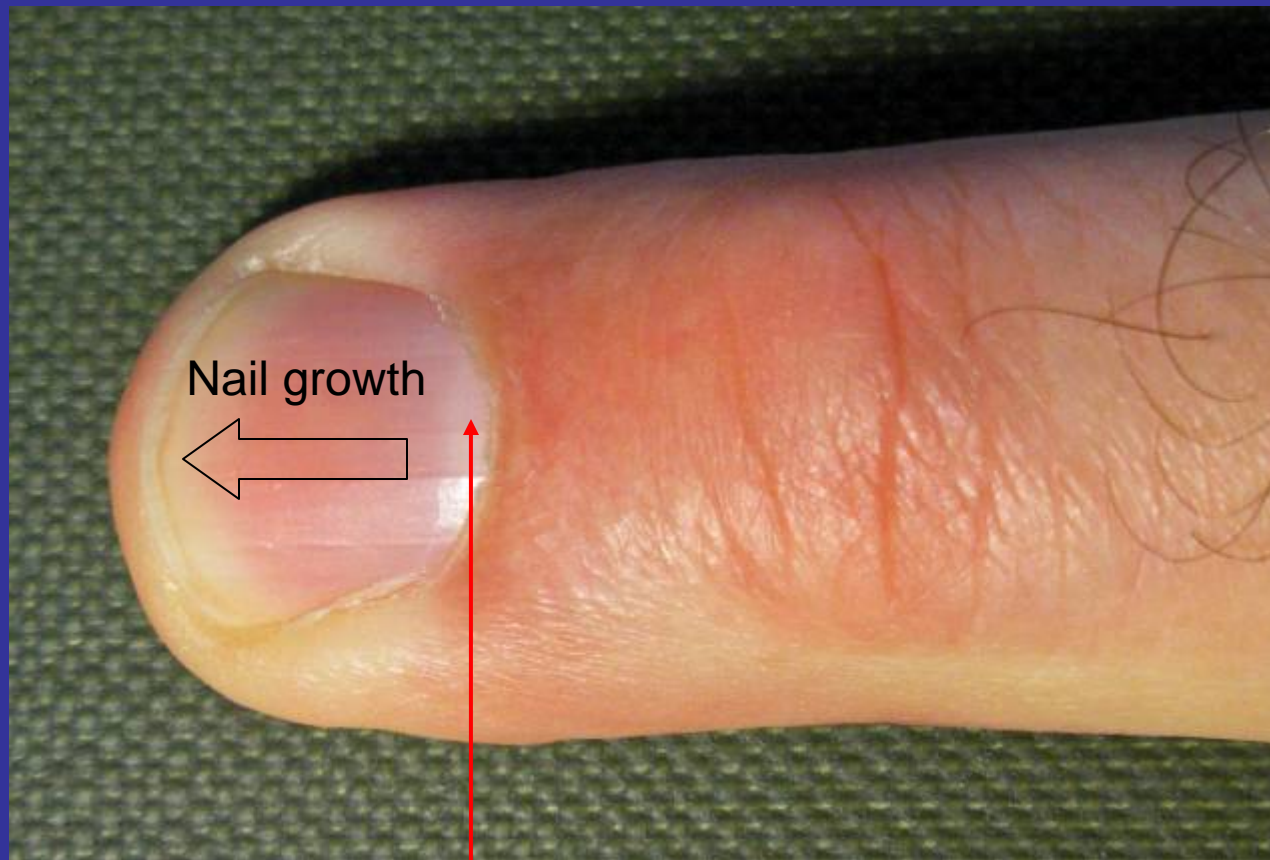




End of Human Infant Finger



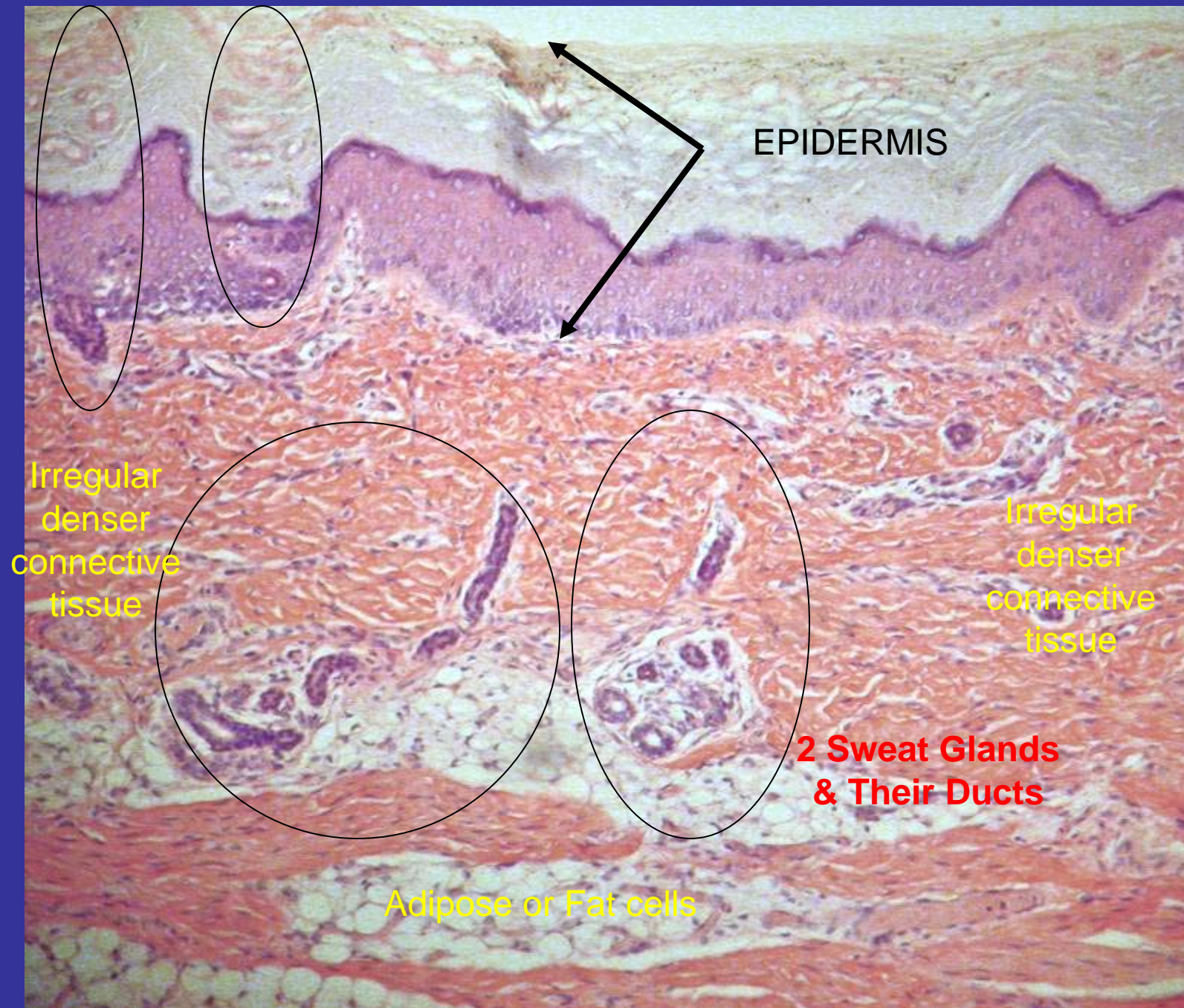
**Nails and hair are 'dead' keratin (protein)**



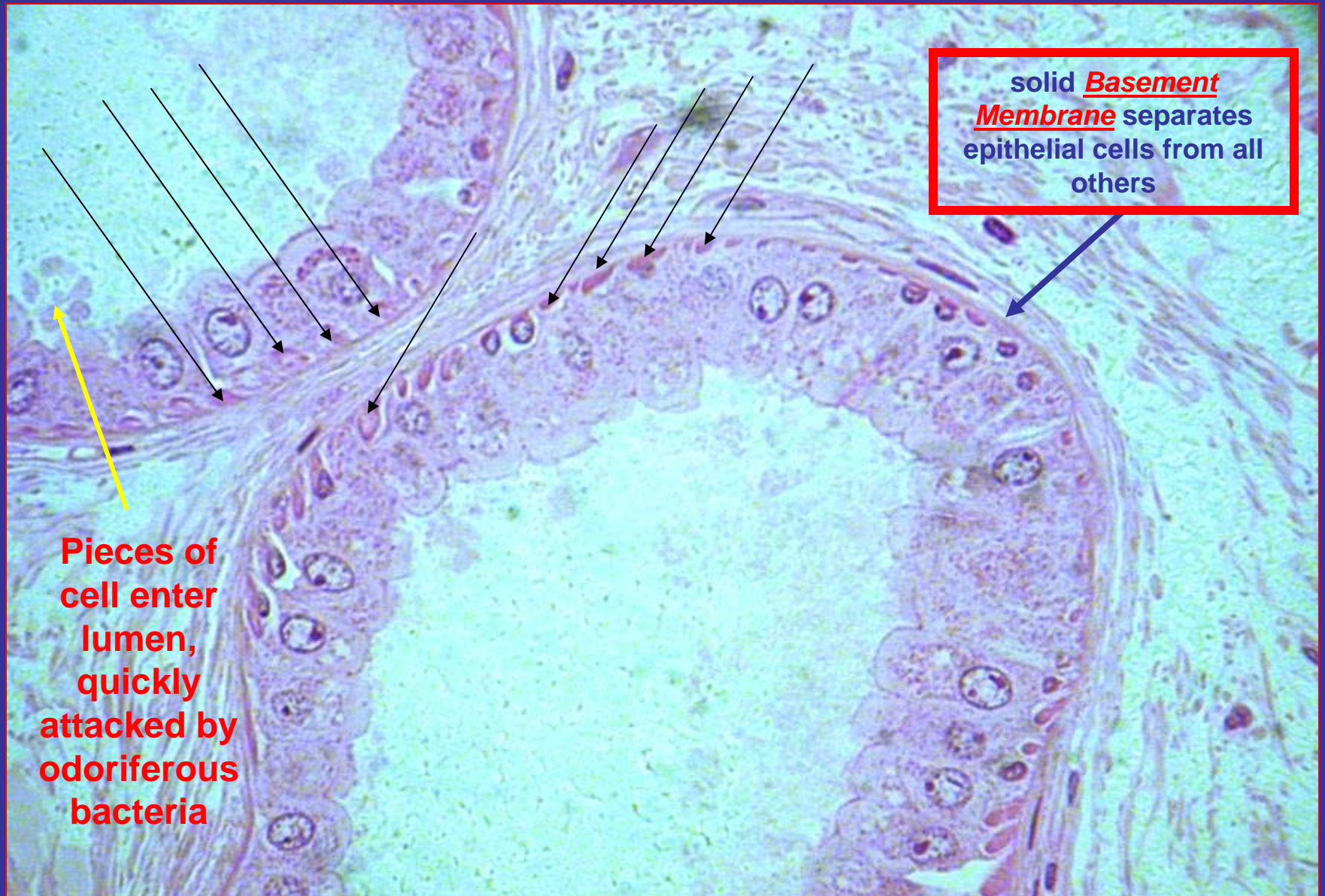
Nail growth

**Lunule**



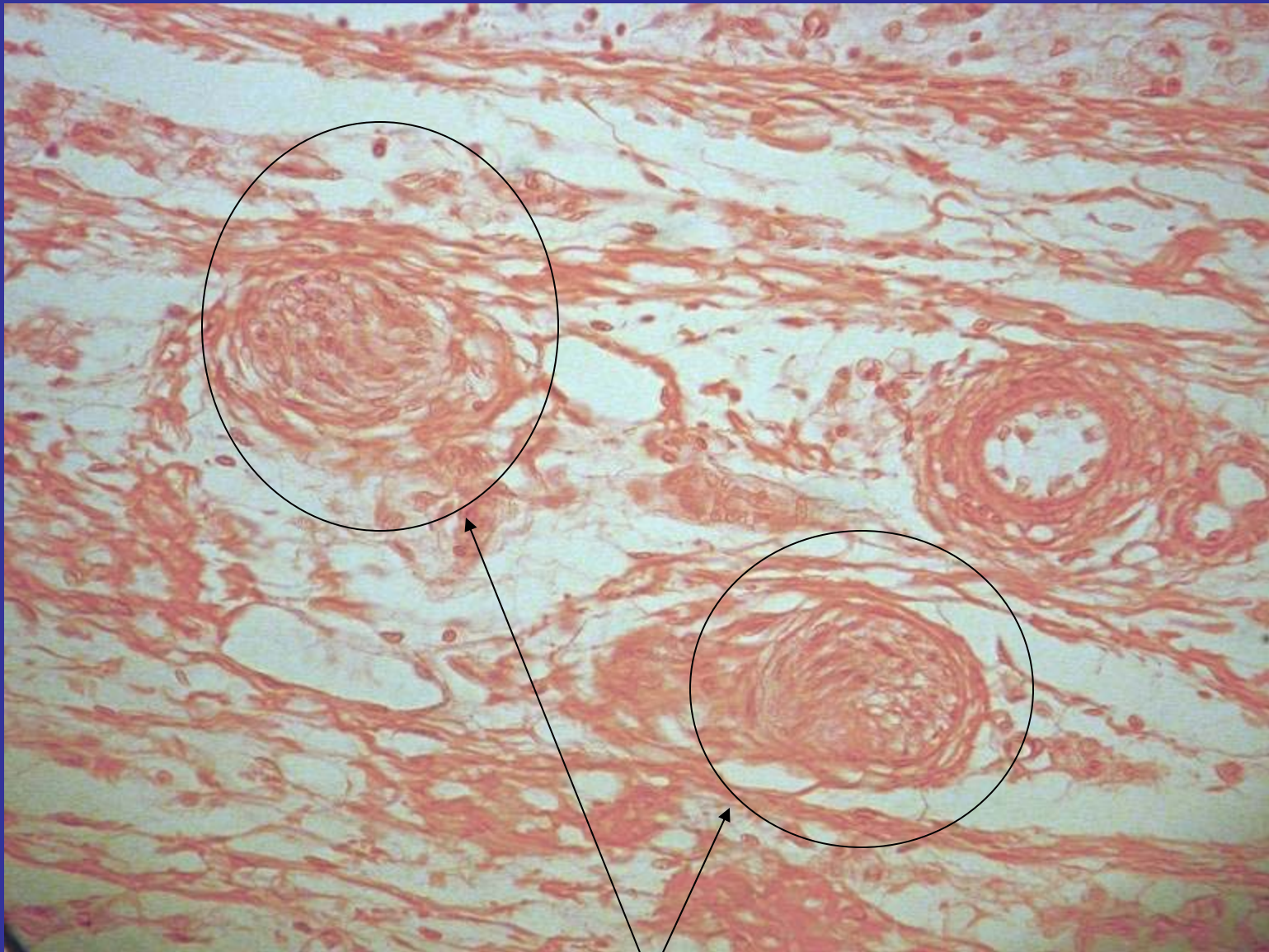






**Human Axilla: Apocrine Sweat Glands (arm pit & crotch area) – note copious secretion granule formation and ‘Myoepithelium’ smooth muscle fibers (*arrows*) at base of each secretory cell**





Pressure sense – Paccinian Corpuscles